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***Plagioporus hypentelii* sp. n. (Trematoda: Opecoelidae)
from the Hogsucker, *Hypentelium nigricans* (LeSueur)
(Osteichthys: Catostomidae)¹**

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ABSTRACT: *Plagioporus hypentelii* sp. n. (Trematoda: Opecoelidae) is described from the intestine of the hogsucker, *Hypentelium nigricans* (LeSueur), in streams of Adams County, Pennsylvania. It most closely resembles *P. serotinus* Stafford, 1904, but differs from it chiefly in its less elongate shape, smaller size, smaller testes, ovary, and eggs, straight cirrus sac, in hosts and geographic location of the hosts.

During the course of examination of freshwater fishes for endohelminths, an undescribed trematode of the genus *Plagioporus* Stafford, 1904, was recovered from the intestine of the northern hogsucker, *Hypentelium nigricans* (LeSueur).

Fish hosts were collected with nets or by electrofishing and usually autopsied within a

few hours of capture. The worms were studied alive and then fixed in hot AFA with slight coverslip pressure. Whole mounts were stained with Semichon's acetocarmine and mounted in permount. Sections were stained with Harris' hematoxylin and eosin.

Unless stated otherwise, the following description is based upon 25 stained whole mounts and five sectioned specimens. All measurements are in micrometers. Means are given first followed by the range in parentheses and are from the whole mounts.

¹ From a dissertation submitted to the Graduate School, University of Maryland, in partial fulfillment of the requirements for the Ph.D. degree in Zoology.

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Plagioporus hypentelii sp. n.
(Fig. 1)

DESCRIPTION: Body lanceolate, aspinous, length 837 (520–1162); width at acetabulum 251 (152–300). Acetabulum in anterior part of middle third of body, length 191 (152–232), width 202 (174–240). Oral sucker subterminal, length 100 (72–120), width 106 (84–129); prepharynx very short; pharynx length 50 (42–57), width 46 (38–56); esophagus length 64 (42–90), width 21 (14–27). Intestinal bifurcation preacetabular; intestinal crura extending to near posterior end of worm, width 27 (20–35). Excretory bladder short, reaching the posterior testis, length 121 (75–187), width 45 (40–53) (six bladders measured); flame cell formula $2[(2+2)+(2+2)] = 16$. Testes postacetabular, tandem, foretestis length 104 (68–144), width 148 (120–188); hind testis length 117 (81–180), width 142 (101–196). Cirrus sac elongate, partially anterior to acetabulum, length 199 (120–255), width 56 (45–72); containing seminal vesicle, length 125 (58–195), width 56 (42–72). Prostate complex leading to genital pore which is on left of midline just anterior to cecal bifurcation. Cirrus short, eversible, unarmed. Ovary just postacetabular and dextral, length 66 (38–104), width 88 (68–115). Seminal receptacle, Laurer's canal, ootype, and Mehlis' gland present. Vitelline reservoir triangular in shape, length 71 (53–106), width 43 (24–63). Uterus extending from ootype anteriorly; metraterm short, joining ejaculatory duct just prior to genital pore. Vitelline follicles numerous, mainly in two lateral bands from region of esophagus to near posterior extremity, length 37 (17–78), width 24 (9–38) (125 follicles measured). Eggs usually fewer than 20 in number, uterine egg length 58 (45–71), width 33 (26–41) (62 eggs measured).

HOST: *Hypentelium nigricans* (LeSueur).

LOCATION IN HOST: Middle and posterior thirds of intestine.

INCIDENCE: Of 34 *H. nigricans* examined 31 were infected with from one to 460 (mean 72.5) specimens of *P. hypentelii*.

LOCALITIES: Marsh Creek (US 30) and Middle Creek (US 15), Adams County, Pa.

HOLOTYPE: USNM Helm. Coll. No. 72458.

PARATYPE: USNM Helm. Coll. No. 72459.

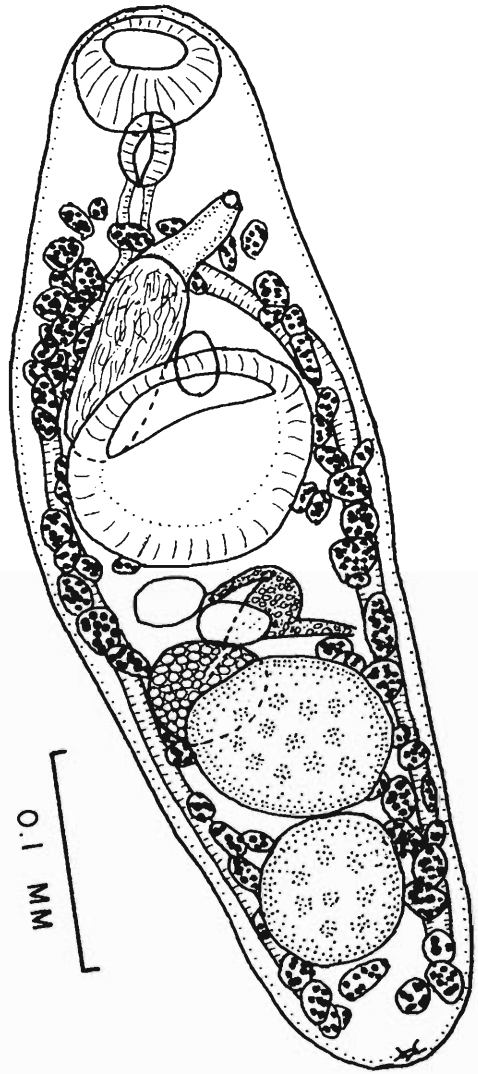


Figure 1. *Plagioporus hypentelii* sp. n., ventral view of holotype.

Discussion

There are currently seven species of *Plagioporus* from North American freshwater fishes. They include the following: *P. angusticolis* (Hausmann, 1896) Dobrovolsky, 1939, in *Salmo*; *P. cooperi* (Hunter and Bangham, 1932) Price, 1934, in *Amocrypta*, *Cottus*, *Etheostoma*, *Gila*, *Notropis*, *Rheocrypta*, and

Richardsonius; *P. macrouterinus* Haderlie, 1953, in *Ptychocheilus*; *P. serotinus* Stafford, 1904, in *Moxostoma* and *Archoplites*; *P. serratus* Miller, 1940, in *Hiodon*; *P. siliculus* Sinitsin, 1931, in *Salmo*; *P. sinitsini* Mueller, 1934, in *Campostoma*, *Catostomus*, *Hyborhynchus*, *Hypentelium*, *Nocomis*, and *Notropis*; also *Plagioporus* sp. in *Salmo* and *Ictalurus* (Hoffman, 1967).

Plagioporus hypentelii differs from *P. angusticolis*, *P. macrouterinus*, and *P. siliculus* in its smaller size, smaller oral sucker, pharynx, ovary, testes, and cirrus sac. It differs further from *P. macrouterinus* in having smaller eggs and a uterus that does not extend posterior to the anterior margin of the foretestis.

P. hypentelii differs from *P. sinitsini* and *P. serratus* in location within the fish host. The latter two are found in the gall bladder while *P. hypentelii* is found only in the intestine. *P. hypentelii* differs further from *P. sinitsini* in its smaller acetabulum, oral sucker, pharynx, and eggs. *P. hypentelii* differs from *P. serratus* in being aspinous, having a larger body, acetabulum, oral sucker, and pharynx, in the position and larger size of the testes, and in host.

P. hypentelii differs from *P. cooperi* in body shape, shorter pharynx, smaller and fewer eggs, longer intestinal crura, and in the host and geographic location.

In the key for the subgenus *Plagioporus* (Stafford, 1904) in Arai and Dooley (1964), my specimens keyed to *P. serotinus*. This is also true for the key to the North American species of *Plagioporus* given by Miller (1940). Although *P. hypentelii* is found in the intestine of the common white sucker, *Catostomus commersoni* (Lacépède), sampled at different seasons, it does not attain sexual maturity in this host, while *P. serotinus* does. *P. hypentelii* differs further from *P. serotinus* in its less elongate shape, smaller body, testes, ovary, and eggs, and in having a straight rather than S-shaped cirrus sac. In addition to the above,

P. hypentelii has a different host and host locality.

Based upon morphological criteria, two other species of North American *Plagioporus* have been removed from the genus by Pritchard (1966). These are now *Allopodocotyle lepomis* (Dobrovolsky, 1939) and *A. virens* (Sinitsin, 1931). I agree that these two species do not belong in the genus *Plagioporus*.

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